Title:

Trisection of an angle and duplicity of the cube by means of special curves

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Abstract:

This bachelor's thesis deals with cardinal rules of compass-and-straightedge constructions, three famous problems in classical Greek mathematics and special curves (the conchoid of Nicomedes, the cisssoid of Diocles, the quadratrix of Hippias, the spiral of Archimedes). In the thesis are described basic geometrical attributes of these curves and their application in the process of solving of trisection of an angle and duplicity of the cube. The special curves are also described by means of the methods of modern mathematics.

Keywords:

the conchoid of Nicomedes, the cisssoid of Diocles, the quadratrix of Hippias, the spiral of Archimedes